WHAT IS CLAIMED IS:

1. A method of clamping a rotationally symmetrical body for the purpose of machining, characterized in that the body (10), with its first side (12), is pulled by means of a tensile force (F1), which acts in extension of the rotation axis (19, 19') of the body (10) on the first side (12) of the body (10), against a supporting element (72) having a centering effect.

2. The method as claimed in claim 1, characterized in that the supporting element (72) is acted upon with a spring force (F2) which is opposed to the tensile force (F1), the spring force (F2) is slightly smaller than the tensile force (F1) and is proportioned in such a way that, when the body (10) strikes the supporting element (72), the supporting element (72) first of all yields in the axial direction.

3. The method as claimed in claim 1 or 2, characterized in that the tensile force (F1) is transmitted to the body (10) by means of a tie rod (64), which is preferably connected to the body (10) by means of a quick-action coupling (20, 40, 46).

4. The method as claimed in claim 3, characterized in that the tie rod (64) is guided with radial clearance (66) axially and concentrically to the rotation axis (19, 19') of the rotationally symmetrical body (10).

5. The method as claimed in one of claims 1 to 4, characterized in that the body (10), with a centering region (28) which is arranged at an axial distance from the first side (12) of the

body (10) and is oriented in the same direction as the first side (12), is pulled against a centering device (76).

6. The method as claimed in one of claims 2 to 5, characterized in that spring force (F2), tensile force (F1) and configuration of supporting element (72) and, if present, of centering device (76) are selected in accordance with the body (10) to be clamped.

7. The method as claimed in claim 6, characterized in that, when a rotor (30) is clamped as a rotationally symmetrical body (10) which preferably has integrally formed moving blades (34), a centering device (76) is selected which has centering surfaces (82) engaging between the moving blades (34) in a finger-like manner.

8. A device for clamping a rotationally symmetrical body (10) for the purpose of machining, characterized in that a tie rod (64) is provided which is mounted in the device (50) in such a way that it can act on the body (10), to be clamped, axially and concentrically to the rotation axis (19, 19') of the latter and is axially guided with radial clearance (66) for the axial pulling movement, the tensile force (F1) of the tie rod (64) preferably being adjustable, and in that a supporting element (72) is provided, against which the rotationally symmetrical body (10) to be clamped can be pulled by means of the tie rod (64).

9. The device as claimed in claim 8, characterized in that the supporting element (72) is supported in a spring-loaded manner on a stop (60) of the device (50) in such a way that it is movable in the axial

direction (19, 19') of the body (10) to be clamped, the spring force (F2) counteracting the tensile force (F1) and preferably being adjustable.

10. The device as claimed in claim 8 or 9, characterized in that the tie rod (64) is provided with a coupling device (63) which can be connected to a coupling unit (18) of the body (10) to be clamped and is preferably designed as the one half of a quick-action coupling (20, 40, 46).

11. The device as claimed in one of claims 8 to 10, characterized in that the supporting element (72) is provided with supporting surfaces (73) which are arranged concentrically to the rotation axis (19, 19') of the body (10) to be clamped and which are preferably inclined toward the rotation axis (19, 19') and/or are contiguous along a defined circumference and form an annular supporting surface.

12. The device according to one of claims 8 to 11, characterized in that a centering device (76) is provided at an axial distance from the supporting element (72), this centering device (76) being provided with centering surfaces (82) which are arranged concentrically to the rotation axis (19, 19') of the body (10) to be clamped and are preferably inclined toward the rotation axis (19, 19').

13. The device as claimed in claim 12, characterized in that the centering surfaces (82) are distributed uniformly over the circumference and extend in a finger-like manner toward the rotation axis (19, 19') from a defined outer circumference up to a defined inner circumference and/or are

contiguous in particular along a defined circumference and form an annular centering surface.

14. The device as claimed in one of claims 8 to 13, characterized in that interchangeable supporting elements (72) of different configuration and, if a centering device (76) is present, interchangeable centering devices (76) of different configuration are provided which can be selected in adaptation to the body (10) to be clamped.

15. A rotationally symmetrical body, in particular a rotor, characterized in that, on a first side (12), it has a coupling unit (18), which is concentric with its rotation axis (19) and can be stressed in tension, and a bearing region (22) having at least three bearing surfaces (24) arranged concentrically to the rotation axis (19).

16. The rotationally symmetrical body as claimed in claim 15, characterized in that the coupling unit (18) can be connected to a coupling device of diametrically opposed design and is preferably designed as the one half of a quick-action coupling (20, 40, 46).

17. The rotationally symmetrical body as claimed in claim 15 or 16, characterized in that the coupling unit (18) essentially has the shape of a concentric hollow cylinder and/or hollow polygon arranged in the body (10).

18. The rotationally symmetrical body as claimed in one of claims 15 to 17, characterized in that the coupling unit (18) is designed as the one half of a bayonet catch (20, 40), to be precise in particular a bayonet catch (20, 40) having

overtightening protection (41), or as the one half of a screwed connection (46).

19. The rotationally symmetrical body as claimed in one of claims 15 to 18, characterized in that the bearing surfaces (24) are inclined toward the rotation axis (19) and enclose with the rotation axis (19) an obtuse angle α within the range of 100° to 170°, preferably 120° to 150° and in particular 135°.

20. The rotationally symmetrical body as claimed in claim 15 or 19, characterized in that the bearing surfaces (24) are surfaces curved toward the rotation axis (19) and toward the first side (12).

21. The rotationally symmetrical body as claimed in one of claims 15 to 20, characterized in that the bearing surfaces (24) are connected to one another and form a closed annular surface.

22. The rotationally symmetrical body as claimed in one of claims 15 to 21, characterized in that a centering region (28) is provided on the second side (26) of the body (10), the bearing surfaces (24') of this centering region (28) being oriented toward the first side (12) of the body (10) and preferably being inclined toward the rotation axis (19).

23. The rotationally symmetrical body as claimed in claim 22, characterized in that the bearing surfaces (24') enclose with the rotation axis (19, 19') an angle β within the range of 15° to 90°, preferably 20° to 60° and in particular 30°, and/or are surfaces curved toward the rotation axis (19).

24. The rotationally symmetrical body as claimed in claim 22 or 23, characterized in that the bearing surfaces (24') of the centering regions (28) are connected to one another and form an annular surface.

25. The rotationally symmetrical body as claimed in one of claims 15 to 24, characterized in that the body (10) has a marking (9) which always permits an identical spatial orientation of the body (10), in particular relative to a marking of a clamping device.

26. The rotationally symmetrical body as claimed in one of claims 15 to 25, characterized in that it is a cast body, and the coupling unit (18), the bearing surfaces (24, 24') and, if present, preferably also the marking (9) are produced essentially by casting.

27. The rotationally symmetrical body as claimed in one of claims 22 to 26, characterized in that the body (10) is a rotor (30) having moving blades (34) preferably integrally formed in one piece, and the bearing surfaces (24, 24'), at least on the second side (26) of the body (10), are preferably arranged between the moving blades (34) or on the blade edges, and the coupling unit (18) is preferably integrated in the hub (32).